

**REMARKS**

This is a full and timely response to the outstanding final Office Action mailed January 17, 2006. Claims 1-17 are preliminarily rejected under 35 USC§103(a) as being unpatentable. The Applicants traverse the rejections to claims 1-17. Reconsideration and allowance of the subject application and presently pending claims 1-17 is respectfully requested.

**II. Response To Claim Rejections Based On Obviousness**

In the Office Action, claims 1-17 are preliminarily rejected under 35 USC 103(a) as being unpatentable over prior art in view of US Patent No. 4,233,580 to Treczka, et al. (hereinafter "Treczka"). There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. See, e.g., In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). If the combination of the references teach every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious is improper. The level of skill in the art cannot be relied upon to provide the suggestion to combine references. Al-Site Corp. v. VSI Int'l Inc, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

**A. Claim 1**

1. A compression journal comprising:  
at least two circularly shaped segments;  
a cylindrical shaft having said circularly shaped segments positioned around said shaft;

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at least one air gap positioned ***circumferentially between the two circularly shaped segments;*** and

means, positioned around the outside of said segments, for maintaining electrical contact between said segments and said cylindrical shaft.  
***(Emphasis added)***

Claim 1 has been preliminarily rejected as obvious based on the prior art in view of Treczka. The prior art referenced teaches a rotary coupler of the contact type. Treczka teaches a rotary coupler of the non-contact type that has folded resonant spaces when seen in radial section. A large central lead aperture may be provided. The prior art cannot be combined with Treczka to teach claim 1.

One having ordinary skill in the art would not be motivated to combine the referenced prior art with Treczka to create claim 1. The present invention makes use of the above-emphasized element to improve electrical contact conductivity in a contact type rotary coupler. Page 3 of the office action suggests that the above-emphasized element is taught by Treczka and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify and rearrange the journal of the prior art to accommodate the air gap of Treczka. However, one of ordinary skill in the art would have recognized the air gap of Treczka is useful in Treczka solely for the purpose of facilitating a non-contact type rotary coupler. There is neither a suggestion, nor any indication that the air gap of Treczka would be useful for enhancing a contact type rotary coupler. One of ordinary skill in the art would not have been motivated to apply air gap as taught by Treczka to improve the electrical contact of a contact type rotary coupler of the prior art.

As one having ordinary skill in the art would not be motivated by the teachings of the prior art and Treczka to modify and rearrange the journal of the prior art to

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accommodate the air gap of Treczka, the Applicants respectfully request withdrawal of the preliminary obviousness rejection of claim 1.

**B. Claims 2-7**

The Applicants respectfully submit that since claims 2-7 depend on independent claim 1, claims 2-7 contain all limitations of independent claim 1. Since independent claim 1 should be allowed, as argued above, pending dependent claims 2-7 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

**1. Claim 5**

The Applicants respectfully submit claim 5 should be allowed for the reasons provided above. The Applicants further submit that nothing in the prior art teaches using one or more O-rings to hold the circularly shaped segments in contact with the rotor shaft. Treczka teaches away from having electrical contact between the stator elements and the rotor elements. The prior art teaches having cylindrical elements circumscribed about the rotor shaft obviating a need for an additional element to hold the cylindrical elements in electrical contact with the rotor shaft.

As neither the prior art referenced, nor the Treczka teach or suggest having a rubber O-ring maintain electrical contact between the segments and the cylindrical shaft, the Applicants respectfully request withdrawal of the preliminary obviousness rejection of claim 5.

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**C. Claim 8**

8. A rotary joint comprising:  
 a rotor assembly having a housing and a shaft extending outward from a center portion thereof;  
 a stator assembly having a cylindrical opening for receiving said shaft of said rotor assembly, the housing of said rotor assembly being secured within a housing of said stator assembly;  
 a cavity in said stator assembly for receiving at least two circularly shaped segments positioned around said shaft of said rotor assembly;  
 at least one air gap positioned ***circumferentially between the two circularly shaped segments***; and  
 means positioned around the outside of said segments for maintaining electrical contact between said segments and said shaft of said rotor assembly.  
**(Emphasis added)**

Claim 8 has been preliminarily rejected as obvious based on the prior art in view of Treczka. The prior art referenced teaches a rotary coupler of the contact type. Treczka teaches a rotary coupler of the non-contact type that has folded resonant spaces when seen in radial section. A large central lead aperture may be provided. The prior art cannot be combined with Treczka to teach claim 8.

One having ordinary skill in the art would not be motivated to combine the referenced prior art with Treczka to create claim 8. The present invention makes use of the above-emphasized element to improve electrical contact conductivity in a contact type rotary coupler. Page 3 of the office action suggests that the above-emphasized element is taught by Treczka and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify and rearrange the journal of the prior art to accommodate the air gap of Treczka. However, one of ordinary skill in the art would have recognized the air gap of Treczka is useful in Treczka solely for the purpose of facilitating a non-contact type rotary coupler. One

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of ordinary skill in the art would not have been motivated to apply air gap as taught by Treczka to improve the electrical contact of a contact type rotary coupler of the prior art.

Further, the "circularly shaped segments" of the prior art, cited in the office action simply as appearing in FIG. 1 and FIG. 2 of the originally filed application, are complete, hollow cylinders (the only "circularly shaped segments" appearing in FIG. 1 and FIG. 2 of the originally filed application are complete, hollow cylinders). These cylinders are for a contact type rotary coupler. For the contact type rotary coupler to function, contact must be maintained between the "circularly shaped segments". It will be noted that neither figure suggests the presence of any air gap. Air gaps are generally considered to create a loss in conductivity in contact type rotary couplers. Indeed, the Applicants' invention is directed toward avoiding air gaps that are created by wear. Nothing in the prior art suggests one would be motivated to use an air gap in conjunction with a contact type rotary coupler.

As one having ordinary skill in the art would not be motivated by the teachings of the prior art and Treczka to modify and rearrange the journal of the prior art to accommodate the air gap of Treczka, the Applicants respectfully request withdrawal of the preliminary obviousness rejection of claim 8.

#### D. Claims 9-17

The Applicants respectfully submit that since claims 9-17 depend on independent claim 8, claims 9-17 contain all limitations of independent claim 8. Since independent claim 8 should be allowed, as argued above, pending dependent claims

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9-17 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

1. Claim 13

The Applicants respectfully submit claim 13 should be allowed for the reasons provided above. The Applicants further submit that nothing in the prior art teaches using one or more O-rings to hold the circularly shaped segments in contact with the rotor shaft. Treczka teaches away from having electrical contact between the stator elements and the rotor elements. The prior art teaches having cylindrical elements circumscribed about the rotor shaft obviating a need for an additional element to hold the cylindrical elements in electrical contact with the rotor shaft.

As neither the prior art referenced, nor the Treczka teach or suggest having a rubber O-ring maintain electrical contact between the segments and the cylindrical shaft, the Applicants respectfully request withdrawal of the preliminary obviousness rejection of claim 13.

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**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, the Applicants respectfully submit that all objections and rejections have been traversed, rendered moot and/or accommodated, and that presently pending claims 1-17 are in condition for allowance. Claims 18-23 have been withdrawn. Favorable reconsideration and allowance of the present application and the presently pending claims are hereby courteously requested. If in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (603) 668-1400.

Respectfully submitted,



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